

What is claimed is:

1. A processing method for a substrate by using a processing apparatus in which each of processing portions for processing a substrate under a depressurized condition comprises a processing chamber for generating plasma and a waiting chamber, said waiting
5 chamber having a load-lock chamber added thereto, wherein the pressure within said waiting chamber is kept to be so high that no plasma is generated therein during which time a substrate is processed within said processing chamber in which plasma is generated under a depressurized condition.
2. A processing method as defined in claim 1, wherein the pressure in said
10 waiting chamber when a substrate is processed within said processing chamber is 200Pa – 3000 Pa.

Marked-up copy of Claim 2 to show changes made

2. (Amended) A processing method as defined in claim [1] 3, wherein the
elevated pressure level in said waiting chamber when a substrate is processed within said
5 processing chamber is in a range of 200Pa – 3000 Pa.

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2. (Amended) A processing method as defined in claim 3, wherein the elevated pressure level in said waiting chamber when a substrate is processed within said processing chamber is in a range of 200Pa – 3000 Pa.

3. (New) A method of processing a substrate in an apparatus comprising a waiting chamber and a processing chamber, said method comprising the steps of:

- a) simultaneously depressurizing the waiting chamber and the processing chamber;
 - b) raising a mounting table having an untreated substrate thereon, thereby placing the untreated substrate into the processing chamber;
 - c) isolating the processing chamber from the waiting chamber by forming a seal therebetween, using an edge portion of the mounting table;
 - d) introducing a first gas into the waiting chamber to increase the pressure therein to a first, elevated pressure level;
 - e) introducing a second, reactive gas into the processing chamber to increase the pressure therein to a second pressure level which is lower than the first pressure level;
- and
- f) applying high frequency power to electrodes of the processing chamber to generate plasma therein to treat said substrate;

whereby the elevated pressure level in the waiting chamber resists unwanted plasma generation therein.

4. (New) A method of conducting an ashing process on a vitreous substrate selected from the group consisting of semiconductor wafers and glass substrates, in an apparatus comprising a hollow housing containing a cavity which is partitionable into a waiting chamber and a processing chamber, said method comprising the steps of:

- a) depressurizing the cavity;
 - b) raising a mounting table having an untreated substrate thereon, thereby placing the untreated substrate into the processing chamber;
 - c) isolating the processing chamber from the waiting chamber by forming a seal therebetween, using the mounting table;
 - d) introducing a first, substantially inert gas into the waiting chamber to increase the pressure therein to a first, elevated pressure level;
 - e) introducing a second, reactive gas into the processing chamber to increase the pressure therein to a second pressure level which is lower than the first pressure level;
- and
- f) applying high frequency power to electrodes of the processing chamber to generate plasma therein to treat said substrate;

whereby the elevated pressure level in the waiting chamber resists unwanted plasma generation therein.

5. (New) A processing method as defined in claim 4, wherein the elevated pressure level in said waiting chamber is in a range of 200Pa – 3000 Pa.

6. (New) The processing method of claim 5, wherein the second pressure level is about 100 Pa.